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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/731,743	12/09/2003	Stephen H. Li	TI-36014	5121

23494 7590 11/28/2005

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EXAMINER

HUYNH, KIM T

ART UNIT PAPER NUMBER

2112

DATE MAILED: 11/28/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)	
	10/731,743	LI ET AL.	
	Examiner	Art Unit	
	Kim T. Huynh	2112	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
  - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
  - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 09 December 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 12-21 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☒ Claim(s) 1-11 are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

**DETAILED ACTION**

***Election/Restrictions***

1. Restriction to one of the following inventions is required under 35 U.S.C 121:

Invention I, claims 1-11, drawn to a switch, classified in class 710, subclass 317.

Invention II, claims 12-21 drawn to arbitration, classified in class 710, subclass 240.

Inventions I and II are related as subcombinations discloses as usable together in a single combination. The subcombinations are distinct from each other if they are shown to be separately usable. See MPEP 806.05(d).

Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

Because these inventions are distinct for the reasons given above and the search required for Group I is not required for Group II, restriction for examination purposes as indicated is proper.

A telephone call was made to William Kempler 28,228 on November 8, 2005 to request an oral election to the above restriction requirement, applicant elected invention II (claims 12-21) without traversed.

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.14(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a petition under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 12-21 are rejected under 35 U.S.C. 102(e) as being anticipated by Kelly et al. (US Patent 6,760,793)

As per claim 12, Kelly discloses an arbitration circuit for an output port, comprising:

- a FIFO queue(fig.8, 831 ie input buffer) containing a head pointer (col.4, lines 50-67) and a plurality of characterizing data for each packet received at an input port(col.8, lines 40-65), the queue forming a look-up table to determine which data will be sent out from the output port; (col9, lines 1-21)

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- a plurality of arbitration circuits coupled to the look-up table for selecting the next packet to be sent out corresponding to a preselected characterizing datum. (col.9, lines 1-48 ie arbiter selects packets via switch to output buffer sets wherein buffer sets implies table)

As per claim 13, Kelly discloses wherein the head pointer of the selected packet is utilized to select the packet from a memory. (col.4, lines 50-65)

As per claim 14, Kelly discloses wherein the memory is a common memory for a plurality of arbitration circuits. (col.9, lines 35-48, wherein buffer sets implies common memory)

As per claim 15, Kelly discloses wherein the arbitration circuit is the arbitration circuit for one port of a PCI Express switch (fig.8, 801). (col.9, lines 1-48)

As per claim 16, Kelly discloses wherein the common memory is shared by all ports in the PCI Express switch. (col.9, lines 1-48 ie I/O interconnect)

As per claim 17, Kelly discloses wherein the common memory is a crossbar memory. (col.9, lines 1-48 ie x-bar switch)

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As per claim 18, Kelly discloses wherein the crossbar memory is a common port, virtual channel or type memory. (col.9, lines 35-48 ie virtual channel)

As per claim 19, Kelly discloses wherein the PCI Express switch (fig.8, 801 ie switch) comprises:

- a plurality of ports; (fig.8, 863 ie I/O interconnect)
- a plurality of port controllers(fig.8, 859 ie interfaces), each controller being coupled to one of the ports;
- a local bus(fig.3, 311 ie internal bus) coupling the port controllers to a controller subsystem; and (col.4, lines 29-49)
- a single crossbar memory (fig.8, 833 ie x-bar switch) coupled to each of the port controllers and the controller subsystem, the crossbar memory serving as a common port or virtual channel memory for each of the port controllers. (col.9, lines 1-48)

As per claim 20, Kelly discloses wherein the crossbar memory is a common port, virtual channel or type memory. (col.9, lines 35-48 ie virtual channel)

As per claim 21, Kelly discloses wherein the crossbar memory is used as the replay memory by storing the head pointer in the port controller.(col.9, lines 1-48)

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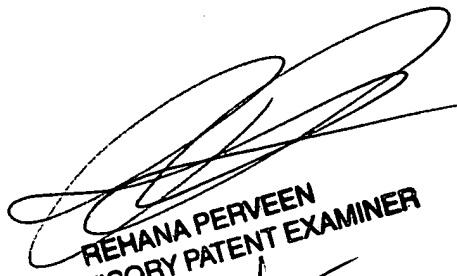
### **Conclusion**

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kim Huynh whose telephone number is (571)272-3635 or via e-mail addressed to [kim.huynh3@uspto.gov]. The examiner can normally be reached on M-F 9.00AM-6:00PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rehana Perveen can be reached at (571)272-3676 or via e-mail addressed to [rehana.perveen@uspto.gov].

The fax phone numbers for the organization where this application or proceeding is assigned are (571)273-8300 for regular communications and After Final communications. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (571)272-2100.

Kim Huynh

November 21, 2005

  
REHANA PERVEEN  
SUPERVISORY PATENT EXAMINER  
11/22/05